

Listing of Claims:

1. (Currently amended) A method for use in managing resources in networking, the method comprising:

 adding a field to an operating system kernel software procedure, the field referencing a virtual router context; and

 modifying packet processing software code to cause the packet processing software code to execute in accordance with the virtual router context; and

running generic application code on an operating system that operates in multiple contexts.

2. (Currently amended) A method for using a network device having an operating system instance that operates in a plurality of routing contexts, the method comprising:

 associating a first network with a first routing context and a second network with a second routing context, wherein the first context is isolated from the second context;

 receiving, at the same networking address of the network device, a first message originating from the first network and a second message originating from the second network by the network device; associating the first message with a first application running on the operating system instance of the network device based on a determination that the first message is associated with the first routing context; and

 associating the second message with a second application running on the operating system instance based on a determination that the second message is associated with the second routing context; and

creating a process in the first routing context that inherits routing context information.

3. (Currently amended) The method of claim 2, wherein a socket for at least one of Transport Control Protocol (TCP), User Datagram Protocol (UDP), and raw IP code associated with the operating system instance ~~is modified to cause the code to execute in accordance with a particular routing context~~ inherits the routing context from the process in the first routing context.

4. (Previously presented) The method of claim 2, further comprising:
 - assigning to the first message a first routing context number, wherein the first message is determined to be associated with the first routing context using the first routing context number; and
 - assigning to the second message a second routing context number, wherein the second message is determined to be associated with the second routing context using the second routing context number.
5. (Previously presented) The method of claim 4, further comprising:
 - assigning a first routing table to the first router context, wherein the first routing table is associated with the first context number; and
 - assigning a second routing table to the second router context, wherein the second routing table is associated with the second context number.
6. (Previously presented) The method of claim 2, wherein the first and second networks are private networks that are isolated from the Internet.
7. (Previously presented) The method of claim 2, wherein information received by the network device from the first network is not provided to the second network by the network device, and wherein information received by the network device from the second network is not provided to the first network by the network device.
8. (Previously presented) The method of claim 2, wherein both the first message and the second message include at least one data packet.
9. (Previously presented) The method of claim 2, wherein the first and second messages are received by the network device using a first network connection initiated by a first process and a second network connection initiated by a second process, respectively, the method further comprising:
 - assigning to the first process a default first routing context number; and
 - assigning to the second process a default second routing context number.

10. (Previously presented) The method of claim 9, further comprising inheriting the default first routing context by a third process, whose parent is the first process, at the time of creation of the third process.
11. (Previously presented) The method of claim 2, further comprising associating at least one interface to the operating system instance with a routing context.
12. (Currently amended) A computer system comprising:
 - a first network that is associated with a first routing context;
 - a second network that is associated with a second routing context;
 - a network device that receives messages from both the first network and second network at a single networking address, wherein the network device is configured to determine that messages received from the first network are associated with the first routing context and to determine that messages received from the second network are associated with the second routing context; and
a process running on the first network that is associated with the first routing context, wherein the process inherits information from the first routing context when the process is created by the first routing context.
- 13 - 20. (Withdrawn).